



Docket No.: M4065.0481/P481
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Glen Hush

Confirmation No.: 2292

Application No.: 10/022,722

Group Art Unit: 2818

Filed: December 20, 2001

Examiner: H. Hoang

For: A PROGRAMMABLE CONDUCTOR
RANDOM ACCESS MEMORY AND A
METHOD FOR WRITING THERETO

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents
Washington, DC 20231

Dear Sir:

Pursuant to 37 CFR 1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed more than three months after the U.S. filing date, OR more than three months after the date of entry of the national stage of a PCT application, AND after the mailing date of the first Office Action on the merits, whichever occurs first, but before the mailing date of a Final Rejection or Notice of Allowance.

I hereby certify that each item of information contained in this Information Disclosure Statement was cited in any communication from a foreign patent office in a

counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

A copy of each reference on PTO/SB/08 is attached.

A concise explanation of relevance of the items listed on form PTO/SB/08 is:

☐ not given

☐ given for each listed item

☐ given for only non-English language listed items

☒ in the form of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

Application No.: 10/022,722

Docket No.: M4065.0481/P481

The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1073, under Order No. M4065.0481/P481. A duplicate copy of this paper is enclosed.

Dated: May 23, 2003

Respectfully submitted

By 

Thomas J. D'Amico

Registration No.: 28,371

Christopher S. Chow

Registration No.: 46,493

DICKSTEIN SHAPIRO MORIN &
OSHINSKY LLP

2101 L Street NW

Washington, DC 20037-1526

(202) 785-9700

Attorneys for Applicant



Docket No.: M4065.0481/P481
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Glen Hush

Confirmation No. 2292

Application No.: 10/022,722

Group Art Unit: 2818

Filed: December 20, 2001

Examiner: H. Hoang

For: A PROGRAMMABLE CONDUCTOR
RANDOM ACCESS MEMORY AND A
METHOD FOR WRITING THERETO

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents
Washington, DC 20231

Dear Sir:

RECEIVED
JUN 10 2003
TECHNOLOGY CENTER 2800

Pursuant to 37 CFR 1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed more than three months after the U.S. filing date, OR more than three months after the date of entry of the national stage of a PCT application, AND after the mailing date of the first Office Action on the merits, whichever occurs first, but before the mailing date of a Final Rejection or Notice of Allowance.

A copy of each reference on PTO/SB/08 is attached.

A concise explanation of relevance of the items listed on form PTO/SB/08 is:

☒ not given

☐ given for each listed item

☐ given for only non-English language listed items

☐ in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

Please charge our Credit Card in the amount of \$180.00 covering the fee set forth in 37 CFR 1.17(p). Credit Card Payment Form SB-2038, with a signature from an authorized cardholder, is enclosed. The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1073, under Order No. M4065.0481/P481. A duplicate copy of this paper is enclosed.

Dated: April ²²17, 2003

Respectfully submitted,

By 

Thomas J. D'Amico

Registration No.: 28,371

Christopher S. Chow

Registration No.: 46,493

DICKSTEIN SHAPIRO MORIN &
OSHINSKY LLP

2101 L Street NW

Washington, DC 20037-1526

(202) 785-9700

Attorneys for Applicant



PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031
U. S. Patent and Trademark Office: U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			C mplete if Kn wn		
			Application Number	10/022,722	
			Filing Date	December 20, 2001	
			First Named Inventor	Glen Hush	
			Art Unit	2818	
			Examiner Name	H. Hoang	
Sheet	1	of	4	Attorney Docket Number	M4065.0481/P481

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	AA	6,469,364	10/2002	Kozicki	
	AB	2002/0168820 App.	11/2002	Kozicki	
	AC	2002/0072188 App	6/2002	Gilton	
	AD	2002/0123169 App	9/2002	Moore et al.	
	AE	2002/0123248 App.	9/2002	Moore et al.	
	AF	3,622,319	11/1971	Sharp	
	AG	3,743,847	7/1973	Boland	
	AH	4,269,935	5/1981	Masters et al.	
	AI	4,312,938	1/1982	Drexler, et al.	
	AJ	4,316,946	1/1982	Masters, et al.	
	AK	4,320,191	3/1982	Yoshikawa et al.	
	AL	4,405,710	9/1983	Balasubramanyam et al.	
	AM	4,419,421	12/1983	Wichelhaus, et al.	
	AN	4,795,657	1/1989	Formigoni et al.	
	AO	4,847,674	7/1989	Sliwa et al.	
	AP	4,499,557	2/1985	Holmberg et al.	
	AQ	5,177,567	1/1993	Klersy et al.	
	AR	5,219,788	6/1993	Abernathey et al.	
	AS	5,238,862	8/1993	Blalock et al.	
	AT	5,315,131	5/1994	Kishimoto et al.	
	AU	5,350,484	9/1994	Gardner et al.	
	AV	5,360,981	11/1994	Owen et al.	
	AW	5,512,328	4/1996	Yoshimura et al.	
	AX	5,512,773	4/1996	Wolf et al.	
	AY	5,726,083	3/1998	Takaishi	
	AA1	5,841,150	11/1998	Gonzalez et al.	
	AB1	5,846,889	12/1998	Harbison et al.	
	AC1	5,920,788	7/1999	Reinberg	
	AD1	5,998,066	12/1999	Block et al.	
	AE1	6,077,729	6/2000	Harshfield	
	AF1	6,117,720	9/2000	Harshfield	
	AG1	6,143,604	11/2000	Chiang et al.	
	AH1	6,177,338	1/2001	Liaw et al.	
	AI1	6,236,059	5/2001	Wolstenholme et al.	
	AJ1	6,297,170	10/2001	Gabriel et al.	
	AK1	6,300,684	10/2001	Gonzalez et al.	
	AL1	6,316,784	11/2001	Zahorik et al.	
	AM1	6,329,606	12/2001	Freyman et al.	
	AN1	6,350,679	2/2002	McDaniel et al.	
	AO1	6,376,284	4/2002	Gonzalez et al.	
	AP1	6,391,688	5/2002	Gonzalez et al.	
	AQ1	6,414,376	7/2002	Thakur et al.	
	AR1	6,423,628	7/2002	Li et al.	
	AS1	6,487,106	11/26/2002	Kozicki	
	AT1	5,314,772	5/24/1994	Kozicki	



PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				C mplete if Kn wn	
				Application Number	10/022,722
				Filing Date	December 20, 2001
				First Named Inventor	Glen Hush
				Art Unit	2818
				Examiner Name	H. Hoang
Sheet	2	of	4	Attorney Docket Number	M4065.0481/P481

	AU1	2002/0190350 APP	12/19/2002	Kozicki	
	AV1	2003/0027416 APP	2/6/2003	Moore	
	AW1	2003/0001229 APP	1/2/2003	Moore et al.	
	AX1	2002/0106849 APP	8/8/2002	Moore	
	AY1	2002/0127886 APP	9/12/2002	Moore et al.	
	AZ1	2002/0123170 APP	9/5/2002	Moore et al.	
	BA1	2002/0163828 APP	11/2002	Krieger et al	
	BB1	6,072,716	6/2000	Jacobson et al.	
	BC1	5,272,359	12/93	Nagasubramanian et al.	
	BD1	4,671,618	6/87	Wu et al.	
	BE1	4,800,526	1/89	Lewis	
	BF1	2003/0035314	02/20/03	Kozicki	
	BG1	2003/0035315	02/20/03	Kozicki	
	BH1	6,473,332	04/04/01	Ignatiev et al.	



PTO/SB/08A (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/022,722
				Filing Date	December 20, 2001
				First Named Inventor	Glen Hush
				Art Unit	2818
				Examiner Name	H. Hoang
Sheet	3	of	4	Attorney Docket Number	M4065.0481/P481

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)					
	BA	JP 56126916		10/1981	Akira et al.		
	BB						

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant

¹ Applicant's unique citation designation number (optional). ² See attached Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.



PTO/SB/08B (10-01)

Approved for use through 10/31/2002. OMB 0651-0031
U. S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

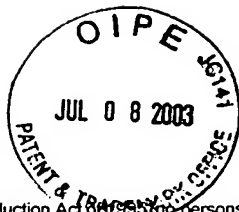
Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known			
		Application Number	10/193,529		
		Filing Date	July 10, 2002		
		First Named Inventor	Kristy A. Campbell		
		Group Art Unit	2714		
		Examiner Name	H. Weiss		
Sheet	4	of	4	Attorney Docket Number	M4065.0695/P695

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CA	Axon Technologies Corporation, TECHNOLOGY DESCRIPTION: <i>Programmable Metalization Cell(PMC)</i> , pp. 1-6 (Pre-May 2000).	
	CB	Helbert et al., <i>Intralevel hybrid resist process with submicron capability</i> , SPIE Vol. 333 SUBMICRON LITHOGRAPHY, pp. 24-29 (1982).	
	CC	Hilt, DISSERTATION: <i>Materials characterization of Silver Chalcogenide Programmable Metalization Cells</i> , Arizona State University, pp. Title page-114 (UMI Company, May 1999).	
	CD	Hirose et al., <i>High Speed Memory Behavior and Reliability of an Amorphous As₂S₃ Film Doped Ag</i> , PHYS. STAT. SOL. (a) 61, pp. 87-90 (1980).	
	CE	Holmquist et al., <i>Reaction and Diffusion in Silver-Arsenic Chalcogenide Glass Systems</i> , 62 J. AMER. CERAM. SOC., No. 3-4, pp. 183-188 (March-April 1979).	
	CF	Huggett et al., <i>Development of silver sensitized germanium selenide photoresist by reactive sputter etching in SF₆</i> , 42 APPL. PHYS. LETT., No. 7, pp. 592-594 (April 1983).	
	CG	Kawaguchi et al., <i>Mechanism of photosurface deposition</i> , 164-166 J. NON-CRYST. SOLIDS, pp. 1231-1234 (1993).	
	CH	Kolobov and Elliott, <i>Photodoping of Amorphous Chalcogenides by Metals</i> , Advances in Physics, Vol. 40, No 5, 625-684 (1991).	
	CI	Kozicki, et al., "Applications of Programmable Resistance Changes in Metal-doped Chalcogenides", Proceedings of the 1999 Symposium on Solid State Ionic Devices, Editors - E.D. Wachsman et al., The Electrochemical Society, Inc., 1 - 12 (1999).	
	CJ	Kozicki, et al., <i>Nanoscale effects in devices based on chalcogenide solid solutions</i> , Superlattices and Microstructures, 27, 485-488 (2000).	
	CK	Kozicki, et al., <i>Nanoscale phase separation in Ag-Ge-Se glasses</i> , Microelectronic Engineering, vol. 63/1-3, 155-159 (2002).	
	CL	M.N. Kozicki and M. Mitkova, <i>Silver incorporation in thin films of selenium rich Ge-Se glasses</i> , Proceedings of the XIX International Congress on Glass, Society for Glass Technology, 226-227 (2001).	
	CM	McHardy et al., <i>The dissolution of metals in amorphous chalcogenides and the effects of electron and ultraviolet radiation</i> , 20 J. PHYS. C.: SOLID STATE PHYS., pp. 4055-4075 (1987)f	
	CN	Owen et al., <i>Metal-Chalcogenide Photoresists for High Resolution Lithography and Sub-Micron Structures</i> , NANOSTRUCTURE PHYSICS AND FABRICATION, pp. 447-451 (M. Reed ed. 1989).	
	CO	Shimizu et al., <i>The Photo-Erasable Memory Switching Effect of Ag Photo-Doped Chalcogenide Glasses</i> , 46 B. CHEM SOC. JAPAN, No. 12, pp. 3662-3365 (1973).	
	CP		
	CQ		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.



PTO/SB/08A (10-01)

Approved for use through 10/31/2002.OMB 0651-0031

U. S. Patent and Trademark Office: U. S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	10/022,722
				Filing Date	December 20, 2001
				First Named Inventor	Glen Hush
				Art Unit	2818
				Examiner Name	H. Hoang
Sheet	1	of	1	Attorney Docket Number	M4065.0481/P481

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	AA	5,761,112	06/02/1998	Murray et al.	
	AB	US 2001/0012214 A1	09/09/2001	Akita et al.	

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ³
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)					
	BC	WO 01/45108 A1		06/21/2001			
	BD	EP 0 274 828		07/20/1988			

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant

¹ Applicant's unique citation designation number (optional). ² See attached Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

RECEIVED
JUN 10 2003
TECHNOLOGY CENTER 2800

Inventor: ~~Glen~~ Hush

Atty Docket No.: M4065.0481/P481 ✓

Application No.: 10/022,722

Filing Date: December 20, 2001

Title: A PROGRAMMABLE CONDUCTOR RANDOM ACCESS MEMORY AND A
METHOD FOR WRITING THERETO

Documents Filed:

Information Disclosure Statement (3 pages in duplicate)

PTO SB/08 (1 page) with references

Via: PTO Daily Run

Sender's Initials: TJD/CSC/cdl

Date: May 23, 2003

LMS



Inventor: Glen Hush

Application No.: 10/022,722

Atty Docket No.: M4065.0481/P481

Title: A PROGRAMMABLE CONDUCTOR RANDOM ACCESS MEMORY AND A METHOD FOR WRITING THERETO

Filing Date: December 20, 2001

Documents Filed:

Transmittal (1 page)

Information Disclosure Statement (3 pages in duplicate)

PTO SB/08 (1 page) with refs.

Payment by credit card. Form PTO-2038 is attached (1 page)

Charge \$180.00 to credit card

Via: PTO Daily Run

Sender's Initials: TJD/CSC/cdl



Fee Transmittal (1 pg)

Date: April 17, 2003

LUS

RECEIVED
JUN 10 2003
TECHNOLOGY CENTER 2800